

In the Specification:

At page 16, amend paragraphs 2 and 3 as follows:

In another embodiment, the invention is a tool that can be used to check both the correctness of the geometric pull-up and the internal integrity of a twin-ferrule tube fitting. Using ultrasonic sensor(s) and a microprocessor embedded with advanced mathematical software, the tool will be able to detect if the tubing is fully bottomed against the tube bore shoulder (i.e. correct tube installation, See Fig. Feature 4). The main advantage of this design is to provide an alternative that is non-destructive (e.g. actual disassembly / re-assembly of fitting) and low in cost (relative to X-raying fitting connections) and greatly reduces the potential for the product to be installed improperly.

The hand-held tool shown in Figures 5-7 verifies correct geometric pull-up, as shown in Fig. Feature 8 (i.e. 1-1/4 turns past finger-tight by gauging the “nut-to-body” gap) and detects if the tubing is fully bottomed against the tube bore shoulder. Further, use of the tool does not require the fitting to be disassembled and thereby eliminates the need to use of X-ray equipment. The tube-gripping portion of the tool verifies the correctness of the geometric pull-up by gauging the “nut-to-body” gap. The nut-to-body gap is held consistent due to tightly toleranced critical dimensions placed on the nut, ferrules, and fitting body. This feature is designed such that the tool cannot fit in between the nut and the fitting body when the required “nut-to-body” gap is reached. As such, the tool acts as a conventional gap gauge, as disclosed in US Patent No. 3,287,813, the disclosure of which is fully incorporated herein by reference. The back end of the tool detects if the tubing is fully bottomed against the tube bore shoulder, located inside the fitting body (i.e. correct tube installation). Using one or more ultrasonic sensors and a microprocessor embedded with advanced mathematical software, the tool can selectively scan critical internal features of the fitting body and components and notify the user, audibly or visually, if the tubing is correctly installed. The tool may scan the fitting using any of the methods described herein above.